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228P Association between chemotherapy toxicities and financial problems in the first three cycles of chemotherapy breast cancer patients

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Background: The aim of the study was to know the Association between chemotherapy toxicities and financial toxicity in the first three cycles of chemotherapy breast cancer patients.

Methods: A prospective cohort study was conducted in a secondary inpatient referral hospital in Karawaci, Tangerang, Banten, Indonesia. Newly diagnosed woman breast cancer patients either done surgery or naïve chemotherapy were included. Subjects were followed if they had chemotherapy toxicity during the three cycles of chemotherapy. Evaluation of chemotherapy toxicity was using National cancer institute common terminology criteria for adverse events (NCI-CTCAE) version 4.0. The subjects were also evaluated if there also had financial problems based on one of domains in the European Organization for research and treatment of cancer core quality of life questionnaire (EORTC-QLQ-C30). The Association was analyzed using Pearson Chi-Square statistics. Other confounding variables also be evaluated using multivariate analysis. The association between them was reported as hazard ratio and 95% confidence interval.

Results: a total of 128 subjects were enrolled in this study. The median age was 47(25-59) years old. Eleven (16.4%) subjects were unmarried. Sixty-five (50.8%) subjects were unemployed. Forty-six (35.9%) subjects were needed social support. Fifty-two (40.6%) subjects had several comorbidities. Seventy-two (56.3) subjects were in the early stage. Sixty-six (51.6%) subjects have not been menopause. Eighty-one (63.3%) subjects got taxane-based chemotherapy, and the others were anthracycline-based. Chemotherapy toxicities were reported in every cycle of chemotherapy with the proportion 16.5% to 23.5% subjects. Financial problem was reported in 14(10.9%) subject after three cycles of chemotherapy. Toxicities were associated with a financial problem with a hazard ratio of 5.538(1.559-19.574) after being adjusted with other confounders variables.

Conclusions: Chemotherapy toxicities after three cycles were associated with financial problems in naïve women breast cancer patients who underwent chemotherapy. Supportive care may be needed to cope with the toxicities in order to decrease the financial problems.

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229P Efficiency of SARS-CoV-2 vaccines in breast cancer patients: Single institutional experience from Institute for Oncology and Radiology of Serbia (IORS)

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Background: Cancer patients are more sensitive to infection induced by SARS-CoV-2, especially ones with impaired immune response. Vaccines are approved as safe and effective, and they are recommended in oncology patients. The aim of our study was to see the percentage of reinfections after second dose of vaccines against SARS-CoV2.

Methods: Between February 1st and December 31st 2021 we collected data from 250 consecutive breast cancer (BC) patients treated at IORS that have received both doses of vaccine against SARS-CoV-2 virus. Demographic data were collected from patients' records. Data about vaccination were collected by questionnaire approved by the Ethics Committee of IORS. Information about efficiency of the vaccines (post vaccination COVID-19 infection) were collected during patient's regular follow-up at IORS.

Results: Patients' median age was 57 years (31-84); 150 patients (42.9%) were without co-morbidities. Early disease was presented in 165 patients (66%) and 85

patients (44%) had metastatic BC. At the time of the vaccination, 83 patients (33.2%) were receiving chemotherapy. Sinopharm vaccine was given in 158 patients (63.2%), followed by Pfizer-BioNTech, Sputnik V and AstraZeneca — 57 (22.8%), 20 (8%) and 15 (6%), respectively. At the time of our analysis three doses of vaccines were given in 123 patients (49.2%). After vaccination 25 patients (10%) had COVID-19 infection of whom three received a third dose; the lowest number of COVID-19 reinfections was in the Pfizer-BioNTech group (4 patients, 7%) and highest was in the Sputnik V group (3 patients, 15%). 6 of them (24%) had metastatic disease. More than half of the patients (60%) were receiving chemotherapy at the time of infection. Median time between second dose of vaccine and COVID-19 infection was 178 days (5-279). The frequency of SARS-CoV-2 pneumonia ranged from 0% in Sputnik V group to 6.7% in the AstraZeneca group. One patient with metastatic BC died due to COVID-19 pneumonia 133 days after second dose of Sinopharm vaccine.

Conclusions: Only 10% of vaccinated patients had COVID-19 infection without significant complications. Our study supports current guidelines which promote vaccination in oncology patients as priority.

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230P A digital therapeutic intervention for breast cancer patients during active treatment: A feasibility study

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Background: Digital interventions can help breast cancer patients better manage their disease through improved lifestyle choices.

Methods: A four-week-long, single-arm trial was conducted in Iceland. Participants were recruited through The Light (Ljósið), a cancer rehabilitation clinic and received a digital therapeutic intervention (Sidekick Health®) for breast cancer patients. The intervention consisted of food logging, activity tracking, surveys, and receiving educational content designed to improve quality of life for breast cancer patients through mindfulness, sleep, stress management, and nutrition. Usage information such as engagement, retention, step goal attainment, and patient-reported outcomes about energy, stress and quality of sleep were collected through the app. Cardiovascular fitness, body composition and cancer-specific quality of life (EORTC QLQ-C30) were assessed at baseline and follow-up.

Results: 18 female breast cancer patients were enrolled (mean age 49.8 years, 5 with metastasis, 15 in chemotherapy, 2 in radiation therapy and 1 in both). All but one participant was active in-app every week, and all completed the pre-and post-program questionnaires. 67% were highly engaged, the median number of weekly active days were 6.1 (IQR: 5.2, 6.9), and mean daily mission interactions were 7.6 (SD= 2.1). By week four, 16/18 were using the step counter with 71% reaching their step goals. The program had high acceptability, 83% of participants said they were likely to recommend it, 83% found the program helpful for remembering to take their medication, 72% said the program helped them deal with the disease. We found no significant change in body composition or cardiovascular fitness by program completion. Health-related quality of life assessment showed that global health status, functioning and symptom burden remained stable from baseline to follow-up. The largest improvement was observed in pain scores, which decreased from 32.4 (SD=19.4) to 21.3 (SD=20.5) (p=0.12).

Conclusions: The high retention, engagement and acceptability suggest that a digital therapeutic intervention is feasible for breast cancer patients. A longer, full-scale RCT is currently being planned to evaluate the efficacy of the intervention.

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